



# STIC Search Report

## EIC 1700

STIC Database Tracking Number: 220843

**TO:** Marianne L Padgett  
**Location:** REM 8D71  
**Art Unit:** 1762  
**April 3, 2007**

**Case Serial Number:** 10/803199

**From:** Kendra Banks  
**Location:** EIC 1700  
**REMSEN 4B28**  
**Phone:** 571/272-2516  
**Kendra.Banks@uspto.gov**

Search Notes

No Cases Reported

US 6,040,057

PATNO IS 6040057

DATE: APRIL 3, 2007  
LIBRARY: PATENT  
FILE: ALL

Your search request is:  
PATNO IS 6040057

Number of PATENTS found with your search request through:  
LEVEL 1... 1

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LEVEL 1 - 1 PATENT

1. 6040057 , March 21, 2000 , Enhancing the strength, moisture resistance, and fire-resistance of wood, timber, lumber, similar plant-derived construction and building materials, and other cellulosic materials, Slimak, Robert A. - Springfield, Virginia, United States (US); Haudenschild, Christian C. - Derwood, Maryland, United States (US); Slimak, Karen M. - P.O. Box 2444, Springfield, Virginia, United States (US), 843160 (08), September 24, 1999 - ASSIGNMENT OF ASSIGNEES INTEREST (SEE DOCUMENT FOR DETAILS)., SLIMAK, KAREN M. 9207 SHOTGUN COURTSPRINGFIELD, VIRGINIA, 22153, Reel and Frame Number: 010262/0882, Slimak, Karen M., Springfield, Virginia, United States (US), United States individual (04)

CORE TERMS: wood, sodium silicate, silicate, soaked, fire retardant, sample, microwave, resistant, alkali, minute ...

LEVEL 1 - 1 OF 1 PATENT

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

6040057

March 21, 2000

Enhancing the strength, moisture resistance, and  
fire-resistance of wood, timber, lumber, similar  
plant-derived construction and building materials, and other  
cellulosic materials

REISSUE: March 18, 2004 - Reissue Application filed Ex. Gp.: 1762; Re. S.N.  
10/803,199 (O.G. October 26, 2004)

APPL-NO: 843160 (08)

FILED-DATE: April 11, 1997

GRANTED-DATE: March 21, 2000

CORE TERMS: wood, sodium silicate, silicate, soaked, fire retardant, sample,  
microwave, resistant, alkali, minute ...

6040057 OR 6,040,057

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6040057 OR 6,040,057

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## Patent Search 6040057 4/3/2007

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For PlusPat Fact Sheet, Pricing and FAQ, see the Questel.Orbit website  
Citations and FI/F-term classification available for Japanese documents  
Last update of file: 2007/03/28 (YYYY/MM/DD) 2007-12/UP (last update)

Search statement 1

**Query/Command : US6040057/PN****\*\* SS 1: Results 1**

Search statement 2

**Query/Command : PRT FULL NONSTOP LEGALALL**

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*/// PLUSPAT - ©QUESTEL-ORBIT - image*

**PN** - US6040057 A 20000321 [US6040057]  
**TI** - (A) Enhancing the strength, moisture resistance, and fire-resistance of wood, timber, lumber, similar plant-derived construction and building materials, and other cellulosic materials  
**PA** - (A) SLIMAK KAREN M (US)  
**PA0** - Slimak, Karen M., Springfield VA [US]  
**IN** - (A) SLIMAK ROBERT A (US); HAUDENSCHILD CHRISTIAN C (US); SLIMAK KAREN M (US)  
**AP** - US84316097 19970411 [1997US-0843160]  
**PR** - US84316097 19970411 [1997US-0843160]  
**IC** - (A) B05D-001/18 B05D-003/02  
**ICAA** - B05D-001/18 [2006-01 A - I R M EP]; B05D-003/02 [2006-01 A - I R M EP]  
**ICCA** - B05D-001/18 [2006 C - I R M EP]; B05D-003/02 [2006 C - I R M EP]

- PCL - ORIGINAL (O) : 428453000; CROSS-REFERENCE (X) : 427397800  
427439000 427440000 427542000 427553000 427554000 428537100
- DT - Basic
- CT - US--51702; US--63618; US--74225; US--74587; US--80086; US-109002; US-293785; US-539928; US-620446; US-627008; US-629600; US1111021; US1125445; US1168831; US1524676; US1532908; US1564706; US1819364; US2041120; US2340728; US2438339; US2647069; US3656975; US3663249; US3663355; US3667978; US3974318; US4443520; US4642268; US4746555; US5205874; US5236499; US5478598  
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**STG** - (A) United States patent

**AB** - Materials variously treated with sodium silicate were studied until enough information was obtained to find a way to solve the problems that have prevented sodium silicate from being used as a fire retardant. These problems are: 1) water solubility (miscible with water), which results in extensive leaching when exposed to water, 2) cracking, chipping and peeling of treated surfaces, and 3) surface granulation. During flame tests it was discovered that sodium silicate formed a foam-like material, and this material was found to have become water insoluble, yet its elemental composition had remained virtually identical to that of the unmodified sodium silicate. This investigator proposes that under the influence of heat and dehydration, sodium silicate undergoes a polymerization process resulting in particles sizes too large to dissolve in water, and then developed a mechanism to explain how the process could occur. The temperature and moisture conditions in treated samples were then manipulated to cause the polymerization process to occur while protecting the wood from damage. Thus samples were prepared that were both water insoluble, and possessed effective fire retardant properties. These samples also proved to be stronger than untreated wood, thus providing an improved product that was fire retardant and moisture resistant. Since aqueous sodium silicate can be combined with other inorganic fire retardants, this technique is a potential method for making any inorganic fire retardants moisture resistant. This represents a potential breakthrough in fire retardants that has been sought for approximately 100 years. In addition, sodium silicate treated samples were made moisture resistant by the application of a micro-thin layer of silicon monoxide to the surface of samples. This technique, also never tried before, represents a second method for providing moisture resistant, fire retardant substances.

**UP** - 2000-13

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*1/1 LGST - ©EPO*

**PN** - US6040057 A 20000321 [US6040057]

**AP** - US84316097 19970411 [1997US-0843160]

**ACT** - 20041026 US/RF-A  
REISSUE APPLICATION FILED  
EFFECTIVE DATE: 20040318

**UP** - 2004-46

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*1/1 CRXX - ©CLAIMS/RX*

**PN** - 6,040,057 A 20000321 [US6040057]

**PA** - Slimak; Karen M.

**ACT** - 19990924 REASSIGNED  
ASSIGNMENT OF ASSIGNORS INTEREST

Assignor: SLIMAK, ROBERT A. DATE SIGNED: 04/11/1997  
HAUDENSCHILD, CHRISTIAN C. DATE SIGNED: 04/11/1997

Assignee: SLIMAK, KAREN M. 9207 SHOTGUN COURT SPRINGFIELD  
VIRGINIA 22153

Reel 010262/Frame 0882

Contact: STEVENS, DAVIS, MILLER & MOSHER THOMAS P. PAVELKO  
1615 L STREET NW, SUITE 850 WASHINGTON, DC 20043-4387

20040318 REISSUE REQUESTED  
ISSUE DATE OF O.G.: 20041026  
REISSUE REQUEST NUMBER: 10/803199  
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 1762

Reissue Patent Number:

Search statement 2

Query/Command : FILE INPADOC

LGST - Time in minutes : 0,05  
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Estimated cost : 0.06 USD  
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CRXX - Time in minutes : 0,01  
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Cost estimated for the last database search : 6.01 USD  
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LITA - Time in minutes : 0,01  
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PLUSPAT - Time in minutes : 0,33  
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Last update of file: 2007/03/28 (YYYY/MM/DD) 2007-12/UP (last update)

Search statement 2

Query/Command : FAM US6040057/PN

1 Patent Groups

\*\* SS 2: Results 1

Search statement 3

Query/Command : FAMSTATE NONSTOP

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PN - US6040057 A 20000321 [US6040057]  
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ICAA - B05D-001/18 [2006-01 A - I R M EP]; B05D-003/02 [2006-01 A - I R M EP]  
ICCA - B05D-001/18 [2006 C - I R M EP]; B05D-003/02 [2006 C - I R M EP]  
PCL - ORIGINAL (O) : 428453000; CROSS-REFERENCE (X) : 427397800  
427439000 427440000 427542000 427553000 427554000 428537100  
DT - Basic  
UP - 2000-13

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*I/I LEGALI - ©EPO*

**PN** - US6040057 A 20000321 [US6040057]

**AP** - US84316097 19970411 [1997US-0843160]

**ACTE** - 20041026 US/RF-A  
REISSUE APPLICATION FILED  
EFFECTIVE DATE: 20040318

**UP** - 2004-46

Search statement . 3